

Application No.: 10/069,772
Inventor: FEUSSNER et al.
Reply to Office Action of 04 May 2006
Docket No.: 50669

Amendments to the Specification:

Please amend the specification as shown:

Please delete the paragraph on page 3, lines 17-18, and replace it with the following paragraph:

Fig. 2 shows comparisons of the amino acid sequences of Co-CalDes (**SEQ ID NO: 2**) with Crepis alona Δ 12-desaturase (Co-Des) (**SEQ ID NOS 15-17, respectively in order of appearance**).

Please delete the paragraph on page 19, line 18, to page 20, line 5, and replace it with the following paragraph:

Example 2 : Isolation and cloning of the Calendula officinalis calendulic acid desaturase

In order to isolate, from Calendula officinalis, DNA sequences which encode a calendulic acid desaturase, various degenerate oligonucleotide primers were derived from amino acid sequences of the conserved histidine boxes of various Δ 12 desaturases.

Primer A: 5' – CCD TAY TTC TCI TGG AAR WWH AGY CAY CG – 3' (SEQ ID NO:3)

forward primer, derived from the amino acid sequence

P Y F S W K Y/I S H R (**SEQ ID NO: 18**)

Primer B: 5' – CCA RTY CCA YTC IGW BGA RTC RTA RTG – 3' (SEQ ID NO:4)

reverse primer, derived from the amino acid sequence

H Y D S S/T E W D/N W (**SEQ ID NO: 19**)

The letters in primers A and B have the following meaning:

R = A/G

Y = C/T

W = A/T

H = A/C/T

B = C/G/T

D = A/G/T

I = ~~inositol~~ **inosine**